Simon Kato
Urbana, IL
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Research Interests

Active Sensing, Algorithms, Statistical Learning, Stochastic Probability, Algorithms, Numerical Analysis

Education

University of Illinois at Urbana-Champaign — Urbana, IL
Ph.D in Computer Science — *June 2022 – Present*

University of Florida — Gainesville, FL
B.S. in Mathematics, B.S. in Statistics, Minor in Computer Science — *Aug. 2018 – April 2022*

GPA: Cumulative UF GPA: 3.96

Experience

Research: Intelligent Motion Laboratory @UIUC — Urbana, IL
Researching online decision makers with applications in robotics — *Jan. 2023-Present*

Research: Parasol Lab@UIUC — Urbana, IL
Researching motion planning under uncertainty. — *Aug. 2022 – May 2023*

Research: Dr. Sara Pollock — Gainesville, FL
Researching extrapolation methods to accelerate the convergence of pageRank algorithm — *August 2021 – May 2022*

Research: Dr. Sara Pollock — Gainesville, FL
Researching generalization of Anderson Accelerated Newton method — *May 2021 – August 2021*

Research: SMILE Lab @UF — Gainesville, FL
Researching image-to-image translation for Non-contrast CT to CT Perfusion Maps — *May. 2020 – Dec. 2022*

Course Assistant for Discrete Structures (COT 3100) — Gainesville, FL
Grading, Teaching, and Aiding teacher with the course — *Jan. 2019 – June 2021*

Publications and Papers

Monte-Carlo Planning for Multi-Modal Active Sensing in High Dimensions — In Progress
Robotic and Automation Letters

Improving Pedestrian Safety with Consumer Grade Earphones — UIUC
Project paper for Smart Homes, cities, and beyond

Model MAGIC: Diagnostically Competitive Performance of A Physiology... — SMILELAB@UF
Under Review - October 3, 2022

Extrapolated Restarted Arnoldi for Solving the PageRank Problem — Dr. Sara Pollock
Institutional Repository at the University of Florida

MAGIC: Multitask Automated Generation of Inter-modal CT Perfusion ... — SMILELAB@UF
Biomedical Engineering Society Annual Conference Proceedings October 6, 2021

Approximate Anderson Acceleration — UF
Project Paper for Graduate Numerical Analysis

An Empirical Inspection into the Stability of CycleGAN and Pix2Pix — UF
Project Paper for Numerical Linear Algebra

Markov Chains: Random Walks in N Dimensions — UF
Project Paper for Combinatorics 2

Face mask synthesizer and ID classifier using conditioning Cycle-GAN — UF
Project Paper for Artificial Intelligence and Heuristics

Conferences

Motion Planning Uncertainty and Applications Presentation
Illinois Summer Research Symposium 2022

Dealing with Uncertainty in Motion Planning Poster
Illinois Summer Research Symposium 2022

Extrapolated Restarted Arnoldi for Solving the PageRank Problem Poster
23rd Annual Undergraduate Research Symposium at University of Florida

Skills

Programming Languages and Similar
C++, Python, LaTex, R, Matlab

Certificates
Andrew NG Machine Learning

Additional Skills, Honors, and Involvement

Languages: English (Fluent), Spanish (Fluent).

Scholarships: HSF Scholar 2020-2022, University Scholars Program @UF, Florida Academic Scholar

Ambassadorship: Ambassador for University Minority Mentorship Program (Aug. 2019 - Jan. 2021)

Award: Best Presentation Runner Up - Illinois Summer Research Symposium 2022